

Poster is available for download at: <https://www.osha.gov/Publications/poster.html>



All workers have the right to:

- A safe workplace.
- Raise a safety or health concern with your employer or OSHA, or report a work-related injury or illness, without being retaliated against.
- Receive information and training on job hazards, including all hazardous substances in your workplace.
- Request an OSHA inspection of your workplace if you believe there are unsafe or unhealthy conditions. OSHA will keep your name confidential. You have the right to have a representative contact OSHA on your behalf.
- Participate (or have your representative participate) in an OSHA inspection and speak in private to the inspector.
- File a complaint with OSHA within 30 days (by phone, online or by mail) if you have been retaliated against for using your rights.
- See any OSHA citations issued to your employer.
- Request copies of your medical records, tests that measure hazards in the workplace, and the workplace injury and illness log.

This poster is available free from OSHA.

Employers must:

- Provide employees a workplace free from recognized hazards. It is illegal to retaliate against an employee for using any of their rights under the law, including raising a health and safety concern with you or with OSHA, or reporting a work-related injury or illness.
- Comply with all applicable OSHA standards.
- Report to OSHA all work-related fatalities within 8 hours, and all inpatient hospitalizations, amputations and losses of an eye within 24 hours.
- Provide required training to all workers in a language and vocabulary they can understand.
- Prominently display this poster in the workplace.
- Post OSHA citations at or near the place of the alleged violations.

FREE ASSISTANCE to identify and correct hazards is available to small and medium-sized employers, without citation or penalty, through OSHA-supported consultation programs in every state.

Contact OSHA. We can help.



1-800-321-OSHA (6742) • TTY 1-877-889-5627 • www.osha.gov

OSHA 3154-05/16

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Personal Protective Equipment (PPE)

The Occupational Safety and Health Administration (OSHA) requires that employers protect you from workplace hazards that can cause injury or illness. Controlling a hazard at its source is the best way to protect workers. However, when engineering, work practice and administrative controls are not feasible or do not provide sufficient protection, employers must provide personal protective equipment (PPE) to you and ensure its use.

PPE is equipment worn to minimize exposure to a variety of hazards. Examples include items such as gloves, foot and eye protection, protective hearing protection (earplugs, muffs), hard hats and respirators.

Employer Obligations	Workers should:
<ul style="list-style-type: none"> ✓ Performing a "hazard assessment" of the workplace to identify and control physical and health hazards. ✓ Identifying and providing appropriate PPE for employees. ✓ Training employees in the use and care of the PPE. ✓ Maintaining PPE, including replacing worn or damaged PPE. ✓ Periodically reviewing, updating and evaluating the effectiveness of the PPE program. 	<ul style="list-style-type: none"> ✓ Properly wear PPE ✓ Attend training sessions on PPE ✓ Care for, clean and maintain PPE, and ✓ Inform a supervisor of the need to repair or replace PPE.

Employers Must Pay for Personal Protective Equipment (PPE)

On May 15, 2008, a new OSHA rule about employer payment for PPE went into effect. With few exceptions, OSHA now requires employers to pay for personal protective equipment used to comply with OSHA standards. The final rule does not create new requirements regarding what PPE employers must provide.

The standard makes clear that employers cannot require workers to provide their own PPE and the worker's use of PPE they already own must be completely voluntary. Even when a worker provides his or her own PPE, the employer must ensure that the equipment is adequate to protect the worker from hazards at the workplace.



Examples of PPE that Employers Must Pay for Include:

- Metatarsal foot protection
- Rubber boots with steel toes
- Non-prescription eye protection
- Prescription eyewear inserts/lenses for full face respirators
- Goggles and face shields
- Fire fighting PPE (helmet, gloves, boots, proximity suits, full gear)
- Hard hats
- Hearing protection
- Welding PPE



Payment Exceptions under the OSHA Rule

Employers are not required to pay for some PPE in certain circumstances:

- Non-specialty safety-toe protective footwear (including steel-toe shoes or boots) and non-specialty prescription safety eyewear provided that the employer permits such items to be worn off the job site. (OSHA based this decision on the fact that this type of equipment is very personal, is often used outside the workplace, and that it is taken by workers from jobsite to jobsite and employer to employer.)
- Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots.
- Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen
- Items such as hair nets and gloves worn by food workers for consumer safety.
- Lifting belts because their value in protecting the back is questionable.
- When the employee has lost or intentionally damaged the PPE and it must be replaced.

OSHA Standards that Apply

OSHA General Industry PPE Standards

- 1910.132: General requirements and payment
- 1910.133: Eye and face protection
- 1910.134: Respiratory protection
- 1910.135: Head protection
- 1910.136: Foot protection
- 1910.137: Electrical protective devices
- 1910.138: Hand protection

OSHA Construction PPE Standards

- 1926.28: Personal protective equipment
- 1926.95: Criteria for personal protective equipment
- 1926.96: Occupational foot protection
- 1926.100: Head protection
- 1926.101: Hearing protection
- 1926.102: Eye and face protection
- 1926.103: Respiratory protection

There are also PPE requirements in shipyards and marine terminals and many standards on specific hazards, such as 1910.1030: Bloodborne pathogens and 1910.146: Permit-required confined spaces.

OSHA standards are online at www.osha.gov.

Sources:

- *Employers Must Provide and Pay for PPE, New Jersey Work Environment Council (WEC) Fact Sheet*
- *OSHA Standards, 1910.132(h) and 1926.95(d)*
- *Employer Payment for Personal Protective Equipment Final Rule, Federal Register: November 15, 2007 (Volume 72, Number 220)*

OSHA[®] FactSheet

Your Rights as a Whistleblower

You may file a complaint with OSHA if your employer retaliates against you by taking unfavorable personnel action because you engaged in protected activity relating to workplace safety or health, asbestos in schools, cargo containers, airline, commercial motor carrier, consumer product, environmental, financial reform, food safety, health insurance reform, motor vehicle safety, nuclear, pipeline, public transportation agency, railroad, maritime, motor vehicle safety, and securities laws.

Whistleblower Laws Enforced by OSHA

Each law requires that complaints be filed within a certain number of days after the alleged retaliation.

- *Asbestos Hazard Emergency Response Act* (90 days)
- *Clean Air Act* (30 days)
- *Comprehensive Environmental Response, Compensation and Liability Act* (30 days)
- *Consumer Financial Protection Act of 2010* (180 days)
- *Consumer Product Safety Improvement Act* (180 days)
- *Energy Reorganization Act* (180 days)
- *Federal Railroad Safety Act* (180 days)
- *Federal Water Pollution Control Act* (30 days)
- *International Safe Container Act* (60 days)
- *Moving Ahead for Progress in the 21st Century Act* (motor vehicle safety) (180 days)
- *National Transit Systems Security Act* (180 days)
- *Occupational Safety and Health Act* (30 days)
- *Pipeline Safety Improvement Act* (180 days)
- *Safe Drinking Water Act* (30 days)
- *Sarbanes-Oxley Act* (180 days)
- *Seaman's Protection Act* (180 days)
- *Section 402 of the FDA Food Safety Modernization Act* (180 days)
- *Section 1558 of the Affordable Care Act* (180 days)
- *Solid Waste Disposal Act* (30 days)
- *Surface Transportation Assistance Act* (180 days)
- *Toxic Substances Control Act* (30 days)
- *Wendell H. Ford Aviation Investment and Reform Act for the 21st Century* (90 days)

Unfavorable Personnel Actions

Your employer may be found to have retaliated against you if your protected activity was a

contributing or motivating factor in its decision to take unfavorable personnel action against you. Such actions may include:

- Applying or issuing a policy which provides for an unfavorable personnel action due to activity protected by a whistleblower law enforced by OSHA
- Blacklisting
- Demoting
- Denying overtime or promotion
- Disciplining
- Denying benefits
- Failing to hire or rehire
- Firing or laying off
- Intimidation
- Making threats
- Reassignment to a less desirable position, including one adversely affecting prospects for promotion
- Reducing pay or hours
- Suspension

Filing a Complaint

If you believe that your employer retaliated against you because you exercised your legal rights as an employee, contact OSHA as soon as possible because you must file your complaint within the legal time limits.

An employee can file a complaint with OSHA by visiting or calling the local OSHA office or sending a written complaint to the closest OSHA regional or area office. Written complaints may be filed by facsimile, electronic communication, hand delivery during business hours, U.S. mail (confirmation services recommended), or other third-party commercial carrier. The date of the postmark, facsimile, electronic communication, telephone call, hand delivery, delivery to a third-party commercial carrier, or in-person filing at an OSHA

office is considered the date filed. No particular form is required and complaints may be submitted in any language.

For OSHA area office contact information, please call 1-800-321-OSHA (6742) or visit www.osha.gov/html/RAmap.html.

Upon receipt of a complaint, OSHA will first review it to determine whether it is valid on its face. All complaints are investigated in accord with the statutory requirements.

With the exception of employees of the U.S. Postal Service, public sector employees (those employed as municipal, county, state, territorial or federal workers) are not covered by the *Occupational Safety and Health Act* (OSH Act). Non-federal public sector employees and, except in Connecticut, New York, New Jersey, the Virgin Islands, and Illinois, private sector employees are covered in states which operate their own occupational safety and health programs approved by Federal OSHA. For information on the 27 State Plan states, call 1-800-321-OSHA (6742), or visit www.osha.gov/dcspp/osp/index.html.

A federal employee who wishes to file a complaint alleging retaliation due to disclosure of a substantial and specific danger to public health or safety or involving occupational safety or health should contact the Office of Special Counsel (www.osc.gov) and OSHA's Office of Federal Agency Programs (www.osha.gov/dep/enforcement/dep_offices.html).

Coverage of public sector employees under the other statutes administered by OSHA varies by statute. If you are a public sector employee and you are unsure whether you are covered under a whistleblower protection statute, call 1-800-321-OSHA (6742) for assistance, or visit www.whistleblowers.gov.

How OSHA Determines Whether Retaliation Took Place

The investigation must reveal that:

- The employee engaged in protected activity;
- The employer knew about or suspected the protected activity;
- The employer took an adverse action; and
- The protected activity motivated or contributed to the adverse action.

If the evidence supports the employee's allegation and a settlement cannot be reached, OSHA will generally issue an order, which the employer may contest, requiring the employer to reinstate the employee, pay back wages, restore benefits, and other possible remedies to make the employee whole. Under some of the statutes the employer

must comply with the reinstatement order immediately. In cases under the *Occupational Safety and Health Act*, *Asbestos Hazard Emergency Response Act*, and the *International Safe Container Act*, the Secretary of Labor will file suit in federal district court to obtain relief.

Partial List of Whistleblower Protections

Whistleblower Protections under the OSH Act

The OSH Act protects workers who complain to their employer, OSHA or other government agencies about unsafe or unhealthful working conditions in the workplace or environmental problems. You cannot be transferred, denied a raise, have your hours reduced, be fired, or punished in any other way because you used any right given to you under the OSH Act. Help is available from OSHA for whistleblowers.

If you have been punished or discriminated against for using your rights, you must file a complaint with OSHA within 30 days of the alleged reprisal for most complaints. No form is required, but you must send a letter or call the OSHA Area Office nearest you to report the discrimination (within 30 days of the alleged discrimination).

You have a limited right under the OSH Act to refuse to do a job because conditions are hazardous. You may do so under the OSH Act only when (1) you believe that you face death or serious injury (and the situation is so clearly hazardous that any reasonable person would believe the same thing); (2) you have tried, where possible, to get your employer to correct the condition, and been unable to obtain a correction and there is no other way to do the job safely; and (3) the situation is so urgent that you do not have time to eliminate the hazard through regulatory channels such as calling OSHA. For details, see www.osha.gov/as/opa/worker/refuse.html. OSHA cannot enforce union contracts or state laws that give employees the right to refuse to work.

Whistleblower Protections in the Transportation Industry

Employees whose jobs directly affect commercial motor vehicle safety or security are protected from retaliation by their employers for, among other things, reporting violations of federal or state commercial motor carrier safety or security regulations, or refusing to operate a vehicle because of violations of federal commercial motor vehicle safety or security regulations or because they have a reasonable apprehension of death or serious injury to themselves or the public and they have sought from the employer and been unable to obtain correction of the hazardous condition.

Similarly, employees of air carriers, their contractors or subcontractors who raise safety concerns or report violations of FAA rules and regulations are protected from retaliation, as are employees of owners and operators of pipelines, their contractors and subcontractors who report violations of pipeline safety rules and regulations. Employees involved in international shipping who report unsafe shipping containers are also protected. In addition, employees of railroad carriers or public transportation agencies, their contractors or subcontractors who report safety or security conditions or violations of federal rules and regulations relating to railroad or public transportation safety or security are protected from retaliation.

Whistleblower Protections for Voicing Environmental Concerns

A number of laws protect employees from retaliation because they report violations of environmental laws related to drinking water and water pollution, toxic substances, solid waste disposal, air quality and air pollution, asbestos in schools, and hazardous waste disposal sites. The *Energy Reorganization Act* protects employees

from retaliation for raising safety concerns in the nuclear power industry and in nuclear medicine.

Whistleblower Protections When Reporting Corporate Fraud

Employees who work for publicly traded companies or companies required to file certain reports with the Securities and Exchange Commission are protected from retaliation for reporting alleged mail, wire, bank or securities fraud; violations of SEC rules or regulations of the SEC; or violations of federal laws relating to fraud against shareholders.

Whistleblower Protections for Voicing Consumer Product Concerns

Employees of consumer product manufacturers, importers, distributors, retailers, and private labelers are protected from retaliation for reporting reasonably perceived violations of any statute or regulation within the jurisdiction of the Consumer Safety Product Safety Commission.

More Information

To obtain more information on whistleblower laws, go to www.whistleblowers.gov.

This is one of a series of informational fact sheets highlighting OSHA programs, policies, or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards and regulations, refer to Title 29 of the Code of Federal Regulations. Because some of these whistleblower laws have only recently been enacted, the final regulations implementing them may not yet be available in the Code of Federal Regulations but the laws are still being enforced by OSHA. This information will be made available to sensory-impaired individuals upon request. Voice phone number: (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.



HANDOUT #3

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Handout #4

Find this online at: <http://www.osha.gov/Publications/3334we-can-help-sm.pdf>

Employer responsibilities

Employers have the responsibility to provide a safe workplace. **Employers MUST provide their employees with a workplace that does not have serious hazards and must follow all OSHA safety and health standards.**

Employers must find and correct safety and health problems. OSHA further requires employers to try to eliminate or reduce hazards first by making changes in working conditions rather than just relying on masks, gloves, earplugs or other types of personal protective equipment. Switching to safer chemicals, implementing processes to trap harmful fumes, or using ventilation systems to clean the air are examples of effective ways to get rid of or minimize risks.

Employers **MUST** also:

- Prominently display the official OSHA *Job Safety and Health – It's the Law* poster that describes rights and responsibilities under the OSH Act. **This poster is free and can be downloaded from www.osha.gov.**
- Inform workers about chemical hazards through training, labels, alarms, color-coded systems, chemical information sheets and other methods.
- Provide safety training to workers in a language and vocabulary they can understand.
- Keep accurate records of work-related injuries and illnesses.
- Perform tests in the workplace, such as air sampling, required by some OSHA standards.
- Provide required personal protective equipment at no cost to workers.*
- Provide hearing exams or other medical tests required by OSHA standards.



- Post OSHA citations and injury and illness data where workers can see them.
- Notify OSHA within 8 hours of a workplace fatality or within 24 hours of any work-related inpatient hospitalization, amputation or loss of an eye (1-800-321-OSHA [6742]).
- Not retaliate against workers for using their rights under the law, including their right to report a work-related injury or illness.

* Employers must pay for most types of required personal protective equipment.

OSHA standards: Protection on the job



OSHA standards are rules that describe the methods that employers must use to protect their employees from hazards. There are OSHA standards for Construction work, Agriculture, Maritime operations, and General Industry, which are the standards that apply to most worksites. These standards limit the amount of hazardous chemicals workers can be exposed to, require the use of certain safe practices and equipment, and require employers to monitor hazards and keep records of workplace injuries and illnesses.

Employers must also comply with the General Duty Clause of the OSH Act, which requires employers to keep their workplace free of serious recognized hazards. This clause is generally cited when no OSHA standard applies to the hazard.

Who OSHA covers

Private sector workers

Most employees in the nation come under OSHA's jurisdiction. OSHA covers private sector employers and employees in all 50 states, the District of Columbia, and other U.S. jurisdictions either directly through Federal OSHA or through an OSHA-approved state program. State-run health and safety programs must be at least as effective as the Federal OSHA program. To find the contact information for the OSHA Federal or State Program office nearest you, call 1-800-321-OSHA (6742) or go to www.osha.gov.



State and local government workers

Employees who work for state and local governments are not covered by Federal OSHA, but have OSH Act protections if they work in those states that have an OSHA-approved state program. The following 22 states or territories have OSHA-approved programs:

Alaska	Arizona	California
Hawaii	Indiana	Iowa
Kentucky	Maryland	Michigan
Minnesota	Nevada	New Mexico
North Carolina	Oregon	South Carolina
Tennessee	Utah	Vermont
Virginia	Washington	Wyoming
Puerto Rico		

Five additional states and one U.S. territory have OSHA-approved plans that cover public sector workers only:

Connecticut	Illinois	Maine
New Jersey	New York	Virgin Islands

Private sector workers in these five states and the Virgin Islands are covered by Federal OSHA.

Federal government workers

Federal agencies must have a safety and health program that meets the same standards as private employers. Although OSHA does not fine federal agencies, it does monitor federal agencies and responds to workers' complaints. The United States Postal Service (USPS) is covered by OSHA.



Not covered under the OSH Act:

- Self-employed;
- Immediate family members of farm employers who do not employ outside employees;
- Workplace hazards regulated by another federal agency (for example, the Mine Safety and Health Administration, the Department of Energy, or Coast Guard).

Examples of OSHA standards include requirements to

provide fall protection, prevent trenching cave-ins, prevent some infectious diseases, assure that workers safely enter confined spaces, prevent exposure to harmful substances like asbestos, put guards on machines, provide respirators or other safety equipment, and provide training for certain dangerous jobs.



Employers must also comply with the General Duty Clause of the OSH Act, which requires employers to keep their workplace free of serious recognized hazards. This clause is generally cited when no OSHA standard applies to the hazard.

You have the right to a safe workplace

The *Occupational Safety and Health Act of 1970* (OSH Act) was passed to prevent workers from being killed or seriously harmed at work. The law requires that employers provide their employees with working conditions that are free of known dangers. The Act created the Occupational Safety and Health Administration (OSHA), which sets and enforces protective workplace safety and health standards. OSHA also provides information, training and assistance to workers and employers. Workers may file a complaint to have OSHA inspect their workplace if they believe that their employer is not following OSHA standards or there are serious hazards.

Contact us if you have questions or want to file a complaint. We will keep your information confidential. We are here to help you. Call our toll-free number at 1-800-321-OSHA (6742) or go to www.osha.gov.



1-800-321-OSHA (6742) TTY 1-877-889-5627
www.osha.gov

The law protects workers from retaliation when using their OSHA rights

The OSH Act protects workers who complain to their employer, OSHA or other government agencies about unsafe or unhealthful working conditions in the workplace or environmental problems. You cannot be transferred, denied a raise, have your hours reduced, be fired, or punished in any other way because you used any right given to you under the OSH Act. Help is available from OSHA for whistleblowers.

If you have been punished or retaliated against for using your rights, you must file a complaint with OSHA within 30 days from the date the retaliatory decision was both made and communicated to you. No form is needed, but you must call OSHA within 30 days of the alleged retaliation at 1-800-321-OSHA (6742) and ask to speak to the OSHA area office nearest you to report the retaliation.

We Are OSHA



We Can Help

Workers' rights under the OSH Act

Workers are entitled to working conditions that do not pose a risk of serious harm. To help assure a safe and healthful workplace, OSHA also provides workers with the right to:

- Ask OSHA to inspect their workplace;
- Use their rights under the law without retaliation;
- Receive information and training about hazards, methods to prevent harm, and the OSHA standards that apply to their workplace. The training must be in a language you can understand;
- Get copies of test results done to find hazards in the workplace;
- Review records of work-related injuries and illnesses; and
- Get copies of their medical records.



Workers can ask OSHA to inspect their workplace

Workers, or their representatives, may file a complaint and ask OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA standards. A worker can tell OSHA not to let their employer know who filed the complaint. **It is a violation of the OSH Act for an employer to fire, demote, transfer or retaliate in any way against a worker for filing a complaint or using other OSHA rights.**

Written complaints that are signed by a worker or their representative and submitted to the closest OSHA office are more likely to result in an on-site OSHA inspection. You can call 1-800-321-OSHA (6742) to request a complaint form from your local OSHA office or visit www.osha.gov/pls/osha7/eComplaintForm.html to submit the form online. Completed forms can also be faxed or mailed to the local OSHA office. Most complaints sent in online may be resolved informally over the phone with your employer.

When the OSHA inspector arrives, workers and their representatives have the right to:

- Go along on the inspection;
- Talk privately with the OSHA inspector; and
- Take part in meetings with the inspector and the employer before and after the inspection is conducted.

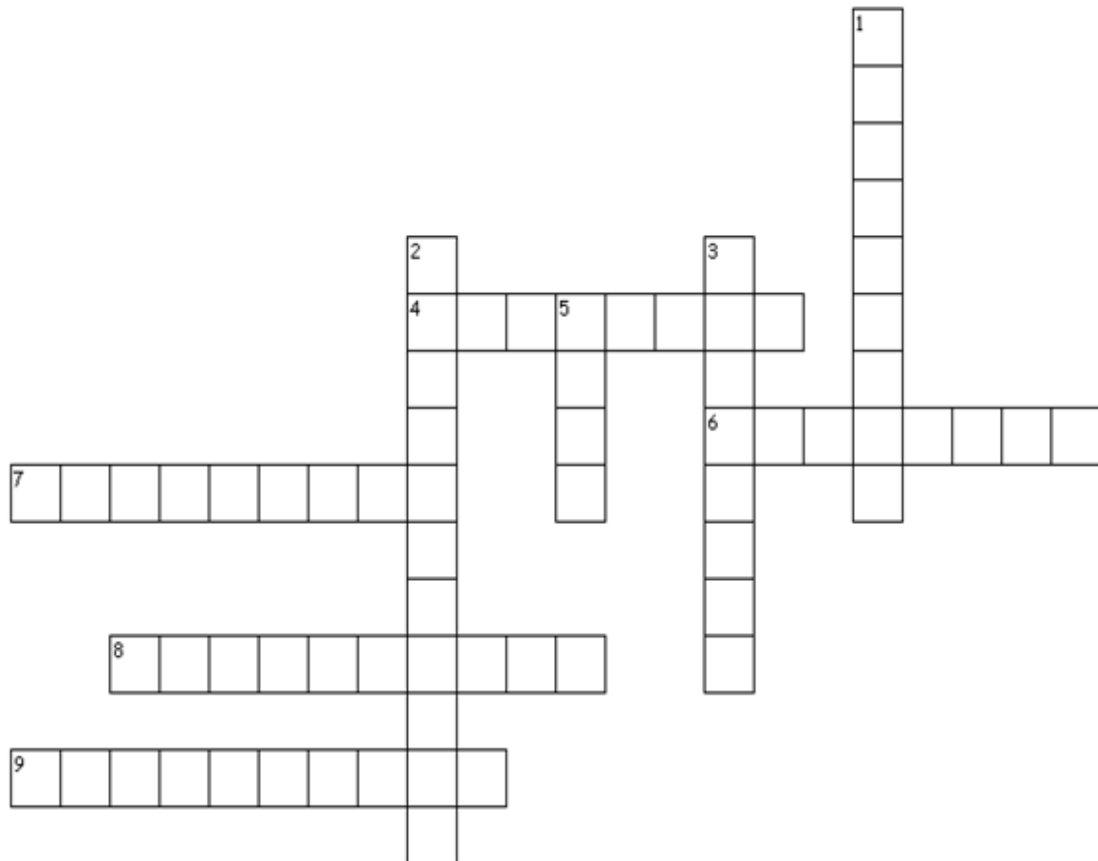
Where there is no union or employee representative, the OSHA inspector must talk confidentially with a reasonable number of workers during the course of the investigation.



HANDOUT #4

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Topic 4: Workers Rights Practice Worksheet
Crossword Puzzle



OSHA Provides Workers the Right to:

Across

4. Hazard _____ and medical records
6. Information about _____ and illnesses in your workplace
7. A safe and _____ workplace
8. Complain or request hazard _____ from employer
9. Participate in an OSHA _____

Down

1. Know about _____ conditions
2. Be free from _____ for exercising safety and health rights
3. _____ as provided in the OSHA standards
5. File a complaint with _____

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Appendix C: OPTIONAL Exercise Scenarios

Construction Industry Scenario

You are a construction worker for ABC, Inc., 1000 Sweet Road, Anytown, USA, 40001. ABC does non-residential plumbing, heating and air conditioning work. You have worked for ABC for 3 years. You, along with 7 co-workers, have been installing sheet metal ductwork in the lower level of the Anytown Shopping Mall, which is undergoing renovation, for the past few weeks. The site is located in the Northwest quadrant, in the basement of the anchor store, located at 555 Times Drive, in Anytown. One of your coworkers has been operating a 65-horsepower concrete cutting saw in the same area. The saw is being run in the propane mode. You and several coworkers get headaches from the fumes whenever the saw is used and have told your supervisor about the problem. The supervisor said that nothing could be done, because the General Contractor, CAB Management, has control over the site and this job will be complete in another month. You did some research and found out that exposure to propane in a confined, unventilated area can cause headaches, dizziness, difficulty breathing and unconsciousness. There is no ventilation or monitoring of the air in the area. After talking with coworkers, you decide to report the hazards.

Construction Focus Four: Fall Hazards
Student Handouts

- Guardrail and Safety Net Systems Summary
- Personal Fall Arrest Systems Summary
- Preventing Ladder Falls
- Scaffold Work Can Be Dangerous

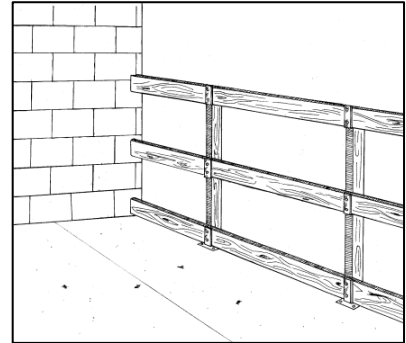
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Guardrail and Safety Net Systems Summary

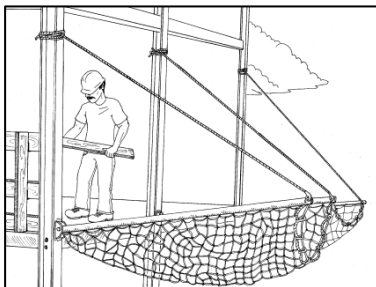
Guardrail and safety net systems are two ways to protect workers from falls on the job. If you are more than 6 feet above the lower surface, some type of fall protection must be used by your employer.

If your employer uses **guardrails**:

- Toprails must be at least $\frac{1}{4}$ inch thick to prevent cuts and lacerations; and they must be between 39 and 45 inches from the working surface;
- If wire rope is used, it must be flagged at least every six feet with highly visible materials;
- Midrails, screens or mesh must be installed when there are no walls at least 21 inches high. Screens and mesh must extend from the toprail to the working level.
- There can be no openings more than 19 inches;
- The toprail must withstand at least 200 lbs. of force; the midrail must withstand 150 lbs. of force;
- The system must be smooth enough to protect workers from cuts and getting their clothes snagged by the rail.
- If guardrails are used around holes at points of access, like a ladderway, a gate must be used to prevent someone from falling through the hole, or be offset so that a person cannot walk directly into the hole.



If your employer uses **safety nets**:



- The nets must be as close as practicable under the working surface, but never more than 30 feet below;
- The safety net must be inspected every week for damage;
- Each net must have a border rope with a minimum strength of 5,000 lbs.;
- The safety net must extend outward a sufficient distance, depending on how far the net is from the working surface (OSHA has a formula to follow);
- The safety net must absorb the force of a 400-pound bag of sand dropping on to the net ("the drop test");
- Items in the net that could be dangerous must be removed as soon as possible.

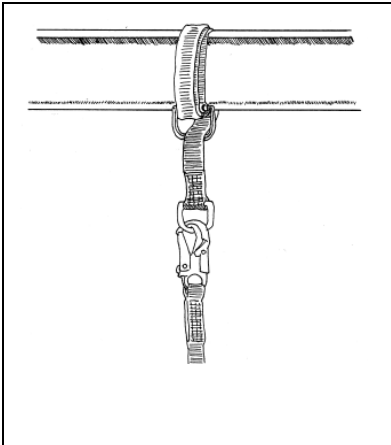
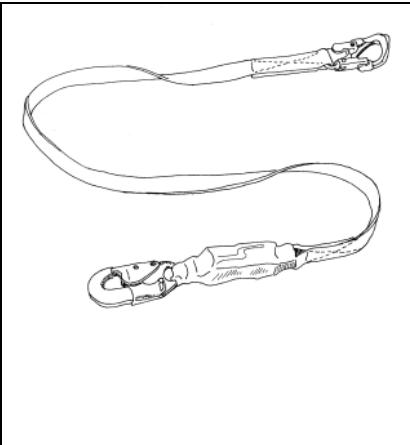
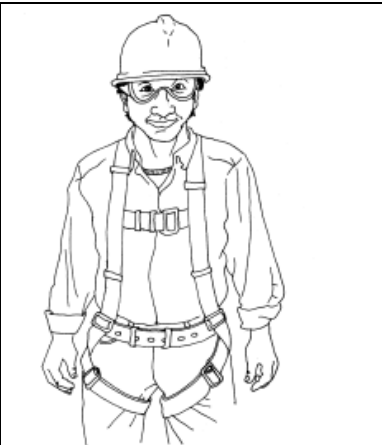
SOURCE: Construction Safety & Health Fall Hazards, Central New York COSH, 2007, OSHA grant product

Personal Fall Arrest Systems Summary

Personal fall arrest systems are one way to protect workers from falls. In general, workers must have fall protection when they could fall 6 feet or more while they are working.

OSHA **requires** workers to wear a full-body harness, (one part of a *Personal Fall Arrest System*) when they are working on a *suspended scaffold* more than *10 feet* above the working surface, or when they are working in *bucket truck or aerial lift*. Employers may also choose to use a Personal Fall Arrest System, instead of a guardrail, when workers are working on a *supported scaffold* more than 10 feet above the working surface.

There are **three** major components of a Personal Fall Arrest System (PFAS):

 A diagram showing a metal anchor with two horizontal bars. A vertical strap with a metal connector is attached to the bottom bar.	 A diagram of a long, thin strap with a metal snaphook at one end and a metal connector at the other.	 A line drawing of a worker wearing a hard hat, safety glasses, and a full-body harness with shoulder straps and a waist belt.
<ul style="list-style-type: none">• the anchor and the anchorage connector	<ul style="list-style-type: none">• the connecting device, which is a lanyard or a retractable lifeline, with snaphooks	<ul style="list-style-type: none">• the full-body harness

The following are some things to remember about personal fall arrest systems:

1. A personal fall arrest system is made up of an **anchorage, connecting device, and a full-body harness**. The connecting device may be a lanyard with snaphooks, or a self-retracting lifeline. A lanyard could also include a deceleration device. Make sure you are using components from the same manufacturer to ensure that the system works as it should. If not, any substitution or change must be evaluated or tested by a competent person to ensure that it meets the standard.

2. **Body belts cannot be used** for fall arresting service. However, a body belt is allowed as part of a positioning system. A positioning system is one way to prevent falls from occurring. It involves equipment for keeping your body in a position where you are not able to fall. For all situations where you could actually fall, you need to wear a full-body harness.

3. Your personal fall arrest system must be **inspected for damage** each time before you wear it. [If there are defects, or if someone has taken a fall using the equipment, it must be removed from service.]

4. The **attachment location** of the body harness must be in the center of your back, near the shoulder level or above your head.
5. **Vertical lifelines or lanyards** must have a minimum breaking strength of 5,000 lbs., and be protected against being cut or abraded.
6. Each worker must be attached to a **separate vertical lifeline**. [There is a special exception when constructing elevator shafts.]
7. The **webbing**, which is the materials used for ropes and straps of lifelines, lanyard and harnesses, must be made of **synthetic** fibers.
8. **An anchorage** for workers' personal fall arrest equipment must be **independent of any anchorage** used to support or suspend platforms, and it must be able to support at least 5,000 lbs. per worker attached to it.
9. **Connectors** must be made from **steel or equivalent** materials, with a corrosion-resistant finish and the edges must be smooth.
10. **D-rings and snaphooks** must have a **minimum tensile strength** of 5,000 lbs.
11. **Snaphooks** must be a **locking-type** (they are generally double-locking) and designed to prevent the snaphook from opening and slipping off the connector.
12. **Snaphooks cannot be directly connected** to the webbing, rope or wire, to each other, to a D-ring to which another snaphook or other connector is attached, to a horizontal lifeline, or to any other object that could cause the snaphook to open.

Preventing Ladder Falls - Construction Safety

Why construction falls?

Here are few basic facts about falls in construction:

- Every day, four construction workers die on the job.
- Falls are the most common cause of fatal injuries to construction workers.
- The consequences of a fall affect not only the worker, but also his or her family and community.
- Construction falls can be prevented. Contractors and foreman can do many things to organize the worksite to be safer for their employees. But workers themselves can also make some inexpensive, simple changes to the way they work that can save their lives.
- Ladders are one of the most common pieces of equipment on a construction site. But that doesn't mean they are safe. There are construction workers who are injured or killed falling from a height every day. Using ladders more safely is one way to start preventing falls at your work site.



Set an example at work

Your co-workers can learn a lot from you. At first, you might be the only one who is concerned with safety at your worksite. But over time, other workers will see that the foreman will give you the time you need to be safe. They will see how many little things add up to big effects on safety. And they will see how they, too, can help to make your worksite safer.

So, set an example. Don't worry about being the first—they'll thank you for it later.

How can I prevent a fall from a ladder?

There are many ways you can prevent a fall from a ladder—here are just three suggestions to get you started.

- **Choose the right ladder for the job.**
- **Tie the top and bottom of the ladder to fixed points when necessary.**
- **Don't carry tools or other materials in-hand while climbing the ladder.**

1. Choose the right ladder for the job.

- First you need to make sure that a ladder is the best equipment for what you need to do. Would scaffolding or a mechanical lift be better?
- Many times, the ladder is the only physical support you have while you are working. If it fails, you can fall. That's why it is so important to find the right ladder when you do need to use one. The three main types of ladders—step ladders, straight ladders, and extension ladders—are used in different situations for different tasks.
- Before you start using a ladder, ask yourself two questions.
- **Is the ladder long enough?** It should be long enough for you to set it at a stable angle and still extend at the top to give you something to hold on to when you get

on the ladder to descend. Setting the ladder at the right angle helps you keep your balance on the ladder. It also helps keep the ladder from falling backwards.

- Make sure the ladder extends 3 feet (3 rungs; 0.9 meters) above the surface you will be working on.
 - Make sure the ladder is placed at a stable angle. For every four feet (1.2 m) high the ladder is, the base should be 1 foot (.3 m) out from the wall
 - For example, if you will be working on a 10 foot-high roof (3 m), you need a ladder that is at least 14 feet (4.25 m) long. The base should be 2 ½ feet (.75 m) from the wall.
- **Is the ladder in good working condition?** It shouldn't be missing pieces or be cracked or otherwise damaged. Check the duty rating on extension ladders – is it high enough for the weight you will be putting on it? Longer ladders don't always have higher duty ratings, so be sure to check. In construction, the most common ratings are:
- Heavy Duty (I) supports up to 250 pounds (113 kg).
 - Extra heavy duty (IA) supports up to 300 pounds (136 kg).
 - Special duty (IAA) supports up to 375 pounds (170 kg).

2. Tie the top and bottom of the ladder to fixed points when necessary: if it doesn't extend 3' above the landing, on slippery surfaces, and where it could be displaced by work activities or traffic.

- Tie both sides of the top of the ladder to a fixed point on the roof or other high surface near where you are working. The bottom should be tied to a fixed point on the ground. Securing the ladder in this way prevents the ladder from sliding side-to-side or falling backwards and prevents the base from sliding.
- Tying the ladder off at the beginning of the day and untying it at the end will only take you about 5 minutes. It can make all the difference for your safety. If you need to move the ladder around, allow extra time for this important step, or consider using something else, such as a scaffold.

3. Don't carry tools or other materials in-hand while climbing the ladder.

- Take precautions when you are going up or down a ladder. Instead of carrying tools, boards, or other materials in your hands, use a tool belt, install a rope and pulley system, or tie a rope around your materials and pull them up once you have reached the work surface. Ask for help if you need to use more than one hand to pull them up.
- Carrying tools or anything else in your hands as you climb the ladder can throw you off balance. When you climb a ladder, always use at least one hand to grasp the ladder when going up or down.

Source: CDC/NIOSH in partnership with CPWR-The Center for Construction Research and Training, Hollywood, Health and Society, and the Spanish-language network Telemundo.

Scaffold Work Can Be Dangerous: Know the Basics of Scaffold Safety

There are thousands of scaffold-related injuries – and about 40 scaffold-related deaths – every year in the U.S. If you are doing work on scaffolds, know how to work on them safely – it could save your life!



Here are some rules about scaffolds that must be followed if you want to work safely:

1. A **competent person** must be available to direct workers who are constructing or moving scaffolds. The competent person must also train workers, and **inspect** the scaffold and its components **before every work shift, and after any event that could affect the structural integrity of the scaffold**. The competent person must be able to identify unsafe conditions, and be authorized by the employer to take action to correct unsafe conditions, to make the workplace safe. And a **qualified person**, someone who has very specific knowledge or training, must actually design the scaffold and its rigging.
2. Every **supported** scaffold and its components must **support, without failure, its own weight and at least four times the intended load**. The intended load is the sum of the weights of all personnel, tools and materials that will be placed on the scaffold. Don't load the scaffold with more weight than it can safely handle.
3. On **supported** scaffolds, working platforms/decks must be planked close to the guardrails. Planks are to be overlapped on a support at least 6 inches, but not more than 12 inches.
4. Inspections of **supported** scaffolds must include:
 - Checking metal components for bends, cracks, holes, rust, welding splatter, pits, broken welds and non-compatible parts.
 - Covering and securing floor openings and labeling floor opening covers.
5. Each rope on a **suspended** scaffold must support the scaffold's weight and at least **six times** the intended load.
6. Scaffold **platforms** must be at least **18 inches wide, (there are some exceptions)**, and guardrails and/or personal fall arrest systems must be used for fall protection any time you are working 10 feet or more above ground level. **Guardrails** must be between 39 and 45 inches high, and **midrails** must be installed approximately halfway between the toprail and the platform surface.
7. OSHA standards require that workers have **fall protection when working on a scaffold 10 or more feet above the ground**. OSHA requires the following:

- The use of a **guardrail OR a personal fall arrest system** when working on a **supported scaffold**.
- **BOTH a guardrail AND a personal fall arrest system** when working on a **single-point or two-point suspended scaffold**.
- A **personal fall arrest system** when working on an **aerial lift**.

8. Your lifeline must be tied back to a **structural anchorage** capable of withstanding **5,000 lbs** of dead weight **per person** tied off to it. Attaching your lifeline to a guardrail, a standpipe or other piping systems will not meet the 5,000 lbs requirement and is not a safe move.

9. Wear hard hats, and make sure there are toeboards, screens and debris nets in place **to protect other people from falling objects**.

10. **Counterweights** for **suspended scaffolds** must be able to resist at least **four times the tipping moment**, and they must be made of materials that cannot be easily dislocated (no sand, no water, no rolls of roofing, etc.). [This would be calculated by the **qualified person** who designs the scaffold.]

11. Your employer must provide safe access to the scaffold when a platform is more than two (2) feet above or below the point of access, or when you need to step across more than 14 inches to get on the platform. **Climbing on cross braces is not allowed!** Ladders, stair towers, ramps and walkways are some of the ways of providing safe access.

12. All workers must be **trained** on:

- how to use the scaffold, and how to recognize hazards associated with the type of scaffold they are working on;
- the maximum intended load and capacity;
- how to recognize and report defects;
- fall hazards, falling object hazards and any other hazards that may be encountered, including electrical hazards (such as overhead power lines); and,
- having proper fall protection systems in place.

SOURCE: Construction Safety & Health Fall Hazards, Central New York COSH, 2007, OSHA grant product

Construction Focus Four: Caught-In or -Between Hazards Student Handouts

- Fatal Facts Accident Summary #5
- Fatal Facts Accident Summary #13
- Fatal Facts Accident Summary #15
- Fatal Facts Accident Summary #18
- Fatal Facts Accident Summary #22
- Fatal Facts Accident Summary #31
- Fatal Facts Accident Summary #38
- Fatal Facts Accident Summary #50
- Fatal Facts Accident Summary #61
- Fatal Facts Accident Summary #73

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ACCIDENT REPORT FATAL FACTS

ACCIDENT SUMMARY No. 5

Accident Type:	Caught in or Between	
Weather Conditions:	Clear	
Type of Company:	Street Paving Contractor	
Size of Work Crew:	1	
Union or Non-union:	Non-Union	
Worksite Inspections Conducted (1926.20(b)(2)):	Yes	
Designated Competent Person on Site (1926.20(b)(2)):	Yes	
Employer Safety Health Program:	Yes	
Training and Education for Employees (1926.21(b)):	Yes	
Craft of Deceased Employee(s):	Ironworker	
Age & Sex:	22-Male	
Time on the Job:	1 day	
Time on Task:	3 Hours	

BRIEF DESCRIPTION OF ACCIDENT

A laborer was steam cleaning a scraper. The bowl apron had been left in the raised position. The hydraulically controlled apron had not been blocked to prevent it from accidentally falling. The apron did fall unexpectedly and the employee was caught between the apron and the cutting edge of the scraper bowl. The apron weighted approximately 2500 pounds.

ACCIDENT PREVENTION RECOMMENDATIONS

ACCIDENT REPORT FATAL FACTS

ACCIDENT SUMMARY No. 13

Accident Type:	Collapse of Shoring	
Weather Conditions:	Clear	
Type of Operation:	Boring and Pipe Jacking Excavation	
Size of Work Crew:	4	
Collective Bargaining:	Yes	
Competent Safety Monitor on Site:	Yes	
Safety and Health Program in Effect:	No	
Was the Worksite Inspected Regularly:	Yes	
Training and Education Provided:	Yes	
Employee Job Title:	Pipe Welder	
Age & Sex:	62-Male	
Experience at this Type of Work:	18 years	
Time on Project:	2½	


BRIEF DESCRIPTION OF ACCIDENT

Four employees were boring a hole and pushing a 20-inch pipe casing under a road. The employees were in an excavation approximately 9 feet wide, 32 feet long and 7 feet deep. Steel plates 8' x 15' x ¾", being used as shoring, were placed vertically against the north and south walls of the excavation at approximately a 30 degree angle. There were no horizontal braces between the steel plates. The steel plate on the south wall tipped over, pinning an employee (who was killed) between the steel plate and the pipe casing. At the time the plate tipped over, a backhoe was being operated adjacent to the excavation.

ACCIDENT PREVENTION RECOMMENDATIONS

ACCIDENT REPORT FATAL FACTS

ACCIDENT SUMMARY No. 15

Accident Type:	Crushed by Dump Truck Body	
Weather Conditions:	Clear, Warm	
Type of Operation:	General Contractor	
Size of Work Crew:	N/A	
Collective Bargaining	Yes	
Competent Safety Monitor on Site:	Yes	
Safety and Health Program in Effect:	Yes	
Was the Worksite Inspected Regularly:	Yes	
Training and Education Provided:	No	
Employee Job Title:	Truck Driver	
Age & Sex:	25-Male	
Experience at this Type of Work:	2 Months	
Time on Project:	2 Weeks at Site	

BRIEF DESCRIPTION OF ACCIDENT

A truck driver was crushed and killed between the frame and dump box of a dump truck. Apparently a safety "over-travel" cable attached between the truck frame and the dump box malfunctioned by catching on a protruding nut of an air brake cylinder. This prevented the dump box from being fully raised, halting its progress at a point where about 20 inches of space remained between it and the truck frame. The employee, apparently assuming that releasing the cable would allow the dump box to continue up-ward, reached between the rear dual wheels and over the frame, and disengaged the cable with his right hand. The dump box then dropped suddenly, crushing his head. The employee had not received training or instruction in proper operating procedures and was not made aware of all potential hazards in his work.

ACCIDENT PREVENTION RECOMMENDATIONS

ACCIDENT REPORT FATAL FACTS

ACCIDENT SUMMARY No. 31

Accident Type:	Cave-in	
Weather Conditions:	Cloudy and Dry	
Type of Operation:	Trenching and excavation	
Size of Work Crew:	4	
Collective Bargaining	No	
Competent Safety Monitor on Site:	Yes	
Safety and Health Program in Effect:	Yes	
Was the Worksite Inspected Regularly:	Yes	
Training and Education Provided:	No	
Employee Job Title:	Pipe Layer	
Age & Sex:	32-Male	
Experience at this Type of Work:	9 Months	
Time on Project:	2 Weeks	

BRIEF DESCRIPTION OF ACCIDENT

Employees were laying sewer pipe in a trench 15 feet deep. The sides of the trench, 4 feet wide at the bottom and 15 feet wide at the top, were not shored or protected to prevent a cave-in. Soil in the lower portion of the trench was mostly sand and gravel and the upper portion was clay and loam*. The trench was not protected from vibration caused by heavy vehicle traffic on the road nearby. To leave the trench, employees had to exit by climbing over the backfill. As they attempted to leave the trench, there was a small cave-in covering one employee to his ankles. When the other employee went to his co-worker's aid another cave-in occurred covering him to his waist. The first employee died of a rupture of the right ventricle of his heart at the scene of the cave-in. The other employee suffered a hip injury.

ACCIDENT PREVENTION RECOMMENDATIONS

*Clay and loam are terms not used any longer; Soil condition is now described using A, B, or C

